



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,008	01/16/2002	Romaine Maiefski	31910-8001US2	9158
25096	7590	09/29/2004	EXAMINER	
PERKINS COIE LLP PATENT-SEA P.O. BOX 1247 SEATTLE, WA 98111-1247			HANDY, DWAYNE K	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/052,008	Applicant(s) MAIEFSKI ET AL.	
	Examiner Dwayne K Handy	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-49 is/are rejected.
- 7) ☒ Claim(s) 45-48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05/24/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 40-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 40 recites the limitation "the sample containing assembly" in lines 20-21. There is insufficient antecedent basis for this limitation in the claim.

Inventorship

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan et al. (5,888,830) in view of Koike et al. (5,660,792). Mohan teaches an apparatus for performing chemical reactions in a plurality of vessels. The device is best shown in Figure 1 and described in column 10. The reaction station system includes a plurality of fluid sources (24, 26) connected to a plurality of fluid lines and a controller (27). The fluid lines are connected to a fluid delivery manifold (20) having an array of fluid retaining members (22). The fluid delivery manifold (20) may be moved by elevator system (29). Each of the fluid retaining members (22) align with the holes (44) of a capping plate (42) to allow distribution of solvent to the reaction vessels (12). Fluids are removed through a valve mechanism (32) and to a waste line (36) for disposal in a

Art Unit: 1743

waste container (38). The Examiner believes that Mohan, then, teaches every element of claim 40 except for a selector valve connected to the fluid lines and being adjustable to multiple positions and a plurality of waste containers.

Koike et al. (5,660,792) teach an automatic solid phase extraction unit that contains a fluid delivery system with a selector valve for selecting between different solvents. The overall unit is shown in Figure 1. It is comprised of a frame (6) having a base portion with a number of racks (2) for holding reaction tubes (5, 9). It also has a support portion for holding the solvents (M1-M6). The solvent dispensing system is shown in Figure 5. It includes the solvents (M1-M6) connected to pumps (28A-28C) and dispensing head (7) through the selector valve (26). The selector valve (26) switches between the six solvent bottles (col. 5, lines 1-4). It would have been obvious to one of ordinary skill in the art to combine the selector valve of Koike with the apparatus of Mohan. One would add the selector valve to allow for switching between multiple source solvents or reagents during synthesis. As for the selector valve sensor, it would have also been obvious to one of ordinary skill in the art to provide a valve sensor on a multiple port sensor. The system of Mohan already teaches valve operation via controller. One would provide a sensor to notify the controller (or user) which of the ports on the sensor was currently in use.

6. Claims 44 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan et al. (5,888,830) and Koike et al. (5,660,792) as applied to claims 40-42 above, and further in view of Petschek et al. (5,389,339). Mohan and Koike, as

combined for claims 40-42 in paragraph 5 above, teach every element of claims 44 and 49 except for a fluid level sensing system connected to at least one of the fluid sources and coupled to a controller. Petschek et al. (5,389,339) teach a biomolecule preparation device which has automated the reagent addition and pipetting steps (Abstract). Liquid level sensors (52) are provided with the reagent storage containers (50) as part of the reagent addition assembly (20). The reagent addition assembly is run by computer (22) in response to the sensors (column 5, lines 4-14). It would have been obvious to one of ordinary skill in the art to combine the liquid level sensors from Petschek with the combined teachings of Mohan and Koike. One would add a liquid level sensing system in order to inform the user that the level of liquids in a fluid source bottle is low.

7. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan et al. (5,888,830) and Koike et al. (5,660,792) as applied to claims 40-42 above, and further in view of Lebl et al. (6,045,755). Mohan and Koike, as combined for claims 40-42 in paragraph 5 above, teach every element of claim 43 except for the fluid retaining members being syringes having a barrel and plunger connected to a support plate. Lebl teaches an integrated automatic workstation for performing combinatorial chemistry synthesis. The device is shown in Figures 17 and 18. It includes a bank of syringes that may be used as reactors. The syringes are interconnected and held in a block (550) and connected to a plunger mechanism (552) that may be moved to draw fluid into or expel fluid from syringes in the array. It would have been obvious to one of

ordinary skill in the art to combine the syringe bank from Lebl with the combined teachings of Mohan and Koike. Mohan currently teaches the loading and expelling of fluids through the manifold in one step. One would add the syringe bank to take advantage of batch processing or step-wise addition of reactant compounds from the syringes.

Allowable Subject Matter

8. Claims 45-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and in a form sufficient to overcome the 112^{2nd} paragraph rejection. Claims 45-48 recite a wash station having a plurality of fluid sources connected to a plurality of fluid lines, a controller and wash station connected to the fluid lines and to each other, a selector valve connected to the fluid lines and manifold, an array of distribution members, a waste managements system as well as a several other features. The additional features include a fluid level sensing system comprised of a plurality of switches and a float for activating the switches (claims 45 and 46) and a fluid level sensing system comprised of a resistance ladder with a plurality of resistors.

Conclusion


Art Unit: 1743

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K Handy whose telephone number is (571)-272-1259. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKH
September 27, 2004


Jill Warden
Supervisory Patent Examiner
Technology Center 1700